```
2
    3
    ###### System hardware info
4
    5
6
    ##Speces - CPU
7
    cmd CPU 0 = 'lscpu' #General CPU specs
8
    cmd CPU 1 = 'cat /proc/cpuinfo' #Each individual cpu core specs
9
10
    ##Specs - RAM
    cmd RAM 0 = 'sudo lshw -short -C memory' #RAM list summary
11
    cmd RAM 1 = 'dmidecode --type memory'
12
                                          #Full RAM specs
13
    cmd RAM 2 = 'grep MemTotal /proc/meminfo' #Total memory
    cmd RAM 3 = 'awk "'"/MemTotal/ {print $2}"'" /proc/meminfo' #Total memory
14
15
16
    ##Specs - DISK
    cmd DISK 0 = 'fdisk -l | grep Disk' #Total hard disk space
17
    cmd DISK 1 = 'lshw -short -C disk' #Disk specs summary
18
19
    cmd DISK 2 = 'lsblk'
20
21
    ##Specs - OS
22
    cmd OS 0 = 'cat /etc/os-release' #Operating system specs
23
24
    ##Specs - HOST
25
    cmd HOST 0 = 'hostnamectl' #host machine info
26
27
    ##Specs - SOFTWARE
28
    cmd SOFT 0 = 'sudo yum list installed | wc -1' #count the software installed
29
    cmd SOFT 1 = 'sudo yum list installed' #list all software installed -->
    https://www.cyberciti.biz/faq/check-list-installed-packages-in-centos-linux/
30
31
    ##Usage - CPU
    cmd CPU use 0 = 'top -b -n1' #using 'top' wont work -->
32
    https://stackoverflow.com/questions/25101619/reading-output-of-top-command-using-paramiko
33
    cmd CPU use 1 = 'ps -eo %cpu,comm --sort=-%mem | head -n 10'
34
35
    ##Usage - RAM
36
    cmd RAM use 0 = 'free -h' #Total free and used memory
    cmd RAM use 1 = 'ps -eo %mem,comm --sort=-%mem | head -n 10' #TOP 10 MEMORY-CONSUMING
37
    PROCESSES
38
39
    cmd CPU RAM use 0 = 'ps -eo %cpu,%mem,comm --sort=-%mem | head -n 10'
40
41
    ##Usage - DISK -->
    https://www.tecmint.com/find-top-large-directories-and-files-sizes-in-linux/
42
    cmd DISK use 0 = 'df -H --output=source, size, used, avail'
43
44
    cmd DISK use 1 = 'du -a /etc/ | sort -n -r | head -n 10' #TOP 10 DISK-CONSUMING PROCESSES
45
46
    cmd DISK use 2 = 'df -h /' #total disk of the root directory
47
    #cmd DISK use 3 = 'df -h --output='size','pcent' /'
48
    #https://linuxiac.com/check-disk-space-linux/
49
    cmd DISK use 4 = 'df -h -t ext4'
50
    #https://www.howtogeek.com/409611/how-to-view-free-disk-space-and-disk-usage-from-the-lin
    ux-terminal/
51
52
   ###### SYSTEM & URL #####
5.3
54
    ##System - PING
    cmd Sys 0 = 'ping -c 10 ' #must have a space after ping. server ip is a variable
55
    containing ip
56
57
    ##System - Uptime
58
    cmd Sys 1 = 'uptime' #How long the machine has been up & running
59
```

```
60
     61
 62
     ###### Linux packages
 63
    64
 65
     # list last installed packages
 66
     cmd installed pkg = 'rpm -qa --last'
 67
 68
     update packages="yum -y update"
 69
 70
     71
72
     ###### 7 zip
73
     74
75
     ### 7zip for file zip -- https://elearning.wsldp.com/pcmagazine/extract-7zip-centos-7/
76
     cmd install p7zip = 'yes | sudo yum install p7zip'
 77
 78
     #https://unix.stackexchange.com/questions/470266/how-to-locate-a-package-installed-by-yum
     /470458
79
     cmd p7zip install path = 'rpm -q --filesbypkg p7zip'
 80
     cmd search 7zip version = 'yum search 7zip'
 81
     cmd info 7zip version = 'yum info 7zip'
82
83
     cmd remove p7zip = 'yes | yum remove p7zip'
     cmd_update_after remove 7zip = 'yum update'
 84
 85
 86
     cmd create p7zip TFM = ''
 87
 88
89
    90
    ##### Epel release
    91
 92
9.3
    cmd install epel release for 7zip = 'yes | sudo yum install epel-release' # yes | will
     ansewr YES to the prompt. yes no | ansewr NO to the prompt.
 94
     cmd import epel gpg key = 'rpm --import
     http://download.fedoraproject.org/pub/epel/RPM-GPG-KEY-EPEL-6'
95
96
     cmd search epel version = 'yum search epel-release'
 97
     cmd epel install path = 'rpm -q --filesbypkg epel-release'
98
99
     #Check installed package versions --
     https://www.tecmint.com/install-epel-repository-on-centos/
     cmd info epel version = 'yum info epel-release'
100
101
     cmd remove epel release = 'yes | yum remove epel-release' # yes | will ansewr YES to the
     prompt. yes no | ansewr NO to the prompt.
102
    cmd_update_after_remove_epel_release = 'yes | yum update' # yes | will ansewr YES to the
     prompt. yes no | ansewr NO to the prompt.
103
104
105
106
    107
    ##### Iptables
108
     109
110
    iptables install="$SUDO $INSTALLER -y install iptables iptables-persistent"
111
    ufw install for centos 1="$SUDO $INSTALLER -y install epel-release"
    ufw install="$SUDO $INSTALLER -y install ufw"
112
113
     iptables version="iptables -V"
114
     iptables ufw iptables enable="$SUDO ufw --force enable"
     iptables ufw iptables disable="$SUDO ufw disable"
115
116
     iptables ufw iptables status="$SUDO ufw status"
117
118
119
     120
     ##### Lsyncd
```

```
122
123
     cmd install rsync="yum install -y rsync"
124
     cmd_lsyncd_install="yum -y install lsyncd"
125
     cmd install sshclients="yum -y install openssh-clients"
126
     cmd rm id rsa='rm -f /root/.ssh/id rsa'
127
     cmd ssh keygen create keys='ssh-keygen -b 2048 -t rsa -f /root/.ssh/id rsa -q -N """
128
     cmd start lsyncd="systemctl start lsyncd"
129
     cmd stop lsyncd="systemattl stop lsyncd"
130
     cmd enable lsyncd="systemattl enable lsyncd"
131
132
133
     134
     ###### Rvsnc
    135
136
137
    rsync install="$SUDO $INSTALLER -y install rsync"
138 rsync version="rsync --version"
139
    rsync start="$SUDO service rsync start"
140 rsync stop="$SUDO service rsync stop"
141 rsync status="$SUDO service rsync status"
142 rsync restart="$SUDO service rsync restart"
143 rsync mkdir www="$SUDO mkdir -p /tmp/var/www"
144 rsync local backup="$SUDO rsync -avn /var/www /tmp/var/www"
145
     rsync remote backup= ''
     #rsync_grep_www="$SUDO grep -nri "/tmp/var/www" /etc/crontab"
146
147
     rsync mode change="$SUDO chmod 0666 /etc/crontab"
148
     rsync mode revert="$SUDO chmod 0644 /etc/crontab"
149
     rsync copy rsyncd conf="$SUDO cp /usr/share/doc/rsync/examples/rsyncd.conf /etc"
150
151
152
     153
     ##### Docker
154
     155
cmd check install or update docker = ''' if [ -x "$(command -v docker)"]; then
157
        echo "Update docker"
158
        # command
159 else
160
        echo "Install docker"
161
        # command
162 fi '''
163
164 docker help ='docker --help'
165 docker install = ''
166 docker container list = 'docker ps'
167
    docker version = 'docker version'
168
    docker status = 'service docker status'
169
    docker start =''
170
    docker stop = ''
171
     docker restart =''
172
173
     cmd Docker install path = 'rpm -q --filesbypkg docker' #this may not work in some
     situtations
174
175
     #remove docker to install a clean copy of docker
     cmd remove docker = '''yum remove docker \
176
177
                     docker-client \
178
                     docker-client-latest \
179
                     docker-common \
180
                     docker-latest \
181
                     docker-latest-logrotate \
182
                     docker-logrotate \
183
                     docker-engine'''
184
185
```

121

186

```
187
     cmd install docker = ''
188
189
     # Multi-line bash script
190
    cmd Docker running or not = '''if curl -s --unix-socket /var/run/docker.sock http/ ping
     2>&1 >/dev/null
191
    then
192
     echo "Running"
193
194
     echo "NOT running"
195
     fi '''
196
    cmd Docker status = 'systemctl status docker' #To check if Docker engine is running
197
198
     cmd start docker engine = 'systemctl start docker'
199
     cmd docker version = 'docker version'
200
201
     #Check if docker is installed, if so update it
    cmd check install or update docker = ''' if [ -x "$(command -v docker)" ]; then
202
        echo "Update docker"
203
204
        # command
205 else
206
     echo "Install docker"
207
        # command
    fi '''
208
209
210
     cmd install docker engine = ''
211
212
213
     214
     cmd docker compose version = 'docker-compose version'
215
216
     cmd install docker compose = ''
217
218
     cmd stop docker compose ='docker-compose stop'
219
     cmd start docker compose = 'docker-compose up -d'
220
221
222
     223
224
     ##### Php
225
     226
227
228
229
230
231
232
233
234
235
    236
     ##### Joomla
237
     238
239
     #https://www.digitalocean.com/community/tutorials/how-to-install-joomla-on-a-virtual-serv
     er-running-centos-6
240
241
     cmd install wget unzip="yum install -y wget unzip"
242
     cmd download joomla="wget -P /tmp/
     https://downloads.joomla.org/cms/joomla3/3-9-25/Joomla 3-9-25-Stable-Full Package.zip"
243
     cmd unzip joomla="unzip -o /tmp/Joomla 3-9-25-Stable-Full Package.zip -d /var/www/html/"
244
     cmd chown html dir="chown -R apache:apache /var/www/html/*"
245
     cmd chmod html dir="chmod -R 775 /var/www/html/*"
     cmd unzip backup="unzip -o /tmp/joomla.zip -d /var/www/html/"
246
     joomla owner permission joomla="$SUDO chown -R www-data:www-data /var/www/html/joomla"
247
248
     joomla mode changes joomla="$SUDO chmod -R 755 /var/www/html/joomla"
249
     #joomla copy file="$SUDO cp /tmp/$OS TYPE/joomla.conf /etc/apache2/sites-available"
250
     #joomla enable virtualhost 1="$SUDO a2ensite joomla.conf"
```

```
251
     #joomla enable virtualhost 2="$SUDO a2enmod rewrite"
252
253
254
     cmd joomla file list = 'find / -name '"'joomla'"' '
255
     cmd admintools file list = 'find / -name '"'admintools'"'
     cmd_rsfirewall_file list = 'find / -name '"'rsfirewall'"' '
256
257
258
259
     260
     ##### Apache - Httpd
261
     262
263
     cmd httpd install="yum install -y httpd"
264
     cmd httpd stop="systemctl stop httpd"
265
     cmd httpd enable="systemctl enable --now httpd"
266
     cmd http firewall="firewall-cmd --permanent --zone=public --add-service=http"
     cmd https firewall="firewall-cmd --permanent --zone=public --add-service=https"
267
     cmd php chown="chown -R root:apache /var/lib/php/*"
268
269
     cmd restart php="systemctl restart php-fpm.service"
270
     cmd install epel="yum install -y epel-release yum-utils"
271
     cmd install remi="yum -y install https://rpms.remirepo.net/enterprise/remi-release-7.rpm"
272
     cmd remi disable="yum-config-manager --disable remi-php54"
273
     cmd remi enable="yum-config-manager --enable remi-php74"
274
     cmd install php tools="yum -y update && yum -y install php-fpm php-cli php-gd
     php-opcache php-mysqlnd php-json php-mcrypt php-xml php-curl mod php"
275
276
277
     278
     ##### Maria DB - Galera cluster
279
     280
281
     cmd mariadb install="yum install -y MariaDB-server MariaDB-client galera"
282
     cmd mariadb start="systemctl start mariadb"
283
     cmd mariadb stop="systemattl stop mariadb"
284
     cmd mariadb restart="systemctl restart mariadb"
285
     cmd mariadb enable="systemctl enable mariadb"
     cmd galera start="galera new cluster"
286
287
     cmd firewalld add 3306 tcp port="firewall-cmd --permanent --zone=public
     --add-port=3306/tcp"
     cmd firewalld add 4567 tcp port="firewall-cmd --permanent --zone=public
288
     --add-port=4567/tcp"
289
     cmd firewalld add 4568 tcp port="firewall-cmd --permanent --zone=public
     --add-port=4568/tcp"
290
     cmd firewalld add 4444 tcp port="firewall-cmd --permanent --zone=public
     --add-port=4444/tcp"
291
     cmd firewalld add 4567 udp port="firewall-cmd --permanent --zone=public
     --add-port=4567/udp"
292
     cmd update galera node status="sed -i 's/safe to bootstrap: 0/safe to bootstrap: 1/'
     /var/lib/mysql/grastate.dat"
293
294
295
     cmd firewalld add 3306 tcp port = (
296
         "firewall-cmd --permanent --zone=public --add-port=3306/tcp"
297
298
     cmd firewalld add 4567 tcp port = (
299
         "firewall-cmd --permanent --zone=public --add-port=4567/tcp"
300
301
     cmd firewalld add 4568 tcp port = (
302
         "firewall-cmd --permanent --zone=public --add-port=4568/tcp"
303
304
     cmd firewalld add 4444 tcp port = (
305
         "firewall-cmd --permanent --zone=public --add-port=4444/tcp"
306
307
     cmd firewalld add 4567 udp port = (
308
         "firewall-cmd --permanent --zone=public --add-port=4567/udp"
309
310
     cmd update galera node status = (
```

```
311
         "sed -i 's/safe to bootstrap: 0/safe to bootstrap: 1/' /var/lib/mysql/grastate.dat"
312
     )
313
314
315
     316
     ##### TiDB
317
     318
319
     cmd install tidb server = "yum install tidb tidb-client tidb-ctl -y"
     cmd install pd = "yum install pd -y"
320
321
     cmd install tikv = "yum install tikv -y"
322
323
     cmd make cluster yaml="""
324
     echo "
325
     # For more information about the format of the tiup cluster topology file, consult
326
     https://docs.pingcap.com/tidb/stable/production-deployment-using-tiup#step-3-initialize-c
     luster-topology-file
327
     # # Global variables are applied to all deployments and used as the default value of
328
329
    # # the deployments if a specific deployment value is missing.
330
     global:
331
       # # The OS user who runs the tidb cluster.
       user: \"tidb\"
332
333
       # # SSH port of servers in the managed cluster.
334
       ssh port: 22
335
       # # Storage directory for cluster deployment files, startup scripts, and configuration
       files.
336
       deploy dir: \"/tidb-deploy\"
337
       # # TiDB Cluster data storage directory
338
       data dir: \"/tidb-data\"
339
       \# \# Supported values: \"amd64\", \"arm64\" (default: \"amd64\")
340
       arch: \"amd64\"
341
342
    pd servers:
343
      - host: 172.20.0.2
344
345
     tidb servers:
      - host: 172.20.0.3
346
347
348
     tikv servers:
349
     - host: 172.20.0.4
350
351
    monitoring servers:
      - host: 172.20.0.5
352
353
354
    grafana servers:
355
       - host: 172.20.0.6
356
     " > cluster.yaml
357
     \Pi_{i}\Pi_{j}\Pi_{j}
358
359
360
     cmd start tidb server = "tidb-server --config=tidb-server.toml"
361
     cmd start pd server = "pd-server --config=pd.toml"
362
     cmd start tikv server= "tikv-server --config=tikv.toml"
363
364
     cmd enable tidb server = "systemctl enable tidb; systemctl start tidb"
365
     cmd enable pd server = "tiup cluster start pd --config=pd.toml"
     cmd enable tikv server = "tiup cluster start tikv --config=tikv.toml"
366
367
368
     # node status
369
     cmd update tidb node status = (
         "sed -i 's/status: 0/status: 1/' /var/lib/tidb/tidbstate.dat"
370
371
372
373
     ## Firewall##
374
```

```
375
     # fire wall add pd port = f"firewall-cmd --zone=public --add-port={server.pd port}/tcp
     --permanent"
     # fire wall add tikv port = f"firewall-cmd --zone=public
376
     --add-port={server.tikv port}/tcp --permanent"
377
     # fire wall add tidb port = f"firewall-cmd --zone=public
     --add-port={server.tidb port}/tcp --permanent"
     # fire wall add tispark port = f"firewall-cmd --zone=public
378
     --add-port={server.tispark port}/tcp --permanent"
379
     # fire wall reload = "firewall-cmd --reload"
380
381
382
     # Set up TiDB cluster
383
     cmd setup tidb cluster = "tidb-ctl create-cluster"
384
385
     # Stop TiDB
386
     cmd stop tidb = "systemctl stop tidb"
387
388
     # Configure TiDB firewall
     cmd configure tidb firewall 4000 = "firewall-cmd --permanent --add-port=4000/tcp"
389
     cmd configure tidb firewall 10080 = "firewall-cmd --permanent --add-port=10080/tcp"
390
391
     cmd reload firewall = "firewall-cmd --reload"
392
393
     cmd install firewall = "yum install firewalld -y"
394
     #cmd tidb configure firewall = "ufw allow from 0.0.0.0 to any port 4000"
395
396
397
398
     399
     ##### Keepalived
400
     401
402
     cmd keepalive install="yum -y install keepalived"
403
     cmd keepalive stop="systemattl stop keepalived"
     cmd keepalive enable="systemattle enable --now keepalived"
404
405
     cmd keepalive conf backup="mv /etc/keepalived/keepalived.conf
     /etc/keepalived/keepalived.conf.bak"
406
407
408
     ##### Fail2ban
409
     410
411
     cmd install Fail2ban = '''yum -y install fail2ban fail2ban-systemd
412
413
     yum update -y selinux-policy*
414
     1.1.1
    cmd configure fail2ban = '''cp -pf /etc/fail2ban/jail.conf /etc/fail2ban/jail.local
415
416
     sed -i "/#ignoreip =/s/^#//g" /etc/fail2ban/jail.local
     sed -i "285i enabled = true" /etc/fail2ban/jail.local
417
     sed -i "286i #action = firewallcmd-ipset" /etc/fail2ban/jail.local
418
     sed -i "287i maxretry = 5" /etc/fail2ban/jail.local
419
420
     sed -i "288i bantime = 86400" /etc/fail2ban/jail.local
421
422
     cmd enable fail2ban = 'systemctl enable fail2ban && systemctl start fail2ban'
423
     cmd remove fail2ban = '''systemctl stop fail2ban && systemctl disable fail2ban
424
     rpm -e --nodeps `rpm -aq | grep -i fail2ban`
425
     1.1.1
426
     fail2ban restart cmd = 'systemctl restart fail2ban'
427
428
429
430
     ###### ClamAV
431
432
     433
434
     cmd install ClamAV = 'yum -y install clamav-server clamav-data clamav-update
     clamav-filesystem clamav clamav-scanner-systemd clamav-devel clamav-lib
     clamav-server-systemd'
```

```
435
     cmd uninstall ClamAV = '''systemctl stop clamd@scan && systemctl disable clamd@scan
436
     rpm -e --nodeps `rpm -aq | grep -i clamav`
437
438
     clamav selinux config="setsebool -P antivirus can scan system 1 && setsebool -P
     clamd use jit 1"
    clamav config='''sed -i -e 's/^Example/#Example/' /etc/clamd.d/scan.conf
439
440
    sed -i "/clamd.sock/s/^#//q" /etc/clamd.d/scan.conf
441
    sed -i -e "s/^Example/#Example/" /etc/freshclam.conf
442
     freshclam
443
444
     clamav enable cmd="systemctl start clamd@scan && systemctl enable clamd@scan"
445
     clamav scan="freshclam && clamscan -r /"
446
     clamav restart cmd="systemctl restart clamd@scan"
447
448
     449
     ##### Lynis audit
450
     451
452
453
    cmd install Lynis = 'yum -y install lynis'
    cmd start Lynis = 'lynis audit system'
454
455
     cmd stop Lynis = 'killall -9 lynis'
456
     cmd remove Lynis = 'rpm -e --nodeps `rpm -aq | grep -i lynis'
457
458
459
     460
     ##### Hosts allow deny
461
     462
463
     ssh touch files = 'touch /etc/hosts.{allow,deny}'
464
     ssh add to allow list = 'echo "sshd: {}" >> /etc/hosts.allow'
465
466
     #ssh deny hosts = 'echo "sshd: ALL" >> /etc/hosts.deny' #Deny ALL hosts
467
     ssh deny hosts = 'echo "sshd: " >> /etc/hosts.deny'
468
469
    470
471
     ##### Inotify
     472
473
474
     cmd install Inotify = '''
475
     yum makecache
     yum -y install inotify-tools
476
477
     cmd remove Inotify = 'yum -y remove inotify-tools'
478
479
480
481
     482
     ##### Rootkit hunter
483
     *******************
484
485
     cmd download RKhunter = '''wget
     http://downloads.sourceforge.net/project/rkhunter/rkhunter/1.4.6/rkhunter-1.4.6.tar.gz
486
     tar zxvf rkhunter-1.4.6.tar.gz
487
488
     cmd install RKhunter = 'cd rkhunter-1.4.6 && bash installer.sh --layout default
     --install'
489
     cmd update RKhunter = '/usr/local/bin/rkhunter --update && /usr/local/bin/rkhunter
     --propupd'
490
     cmd run RKhunter = 'rkhunter --check --skip-keypress'
     cmd remove RKhunter = 'rm -rf /usr/local/bin/rkhunter && rm -rf /root/rkhunter-1.4.6*'
491
492
493
     # ModEvasive
494
    cmd install ModEvasive = 'yum install mod evasive -y'
    cmd remove ModEvasive = '''yum -y remove mod evasive
495
496
     systemctl restart httpd
497
     1.1.1
```

```
499
500
    501
    ##### Modsecurity
502
    503
504
    cmd install ModSecurity = 'yum install mod security -y'
505
    cmd install rule set = 'yum -y install mod security crs'
    cmd remove ModSecurity = '''yum -y remove mod security
506
507
    systemctl restart httpd
508
509
    apache reload cmd = 'systemctl reload httpd'
510
511
    512
513
    ##### Haproxv
514
    515
516
    cmd install haproxy="yum -y install haproxy"
    cmd chmod="cd /etc/firewalld/services && restorecon haproxy.xml && chmod 640 haproxy.xml"
517
518
    cmd haproxy add service="firewall-cmd --permanent --add-service=haproxy"
519
    cmd firewalld reload="firewall-cmd --reload"
    cmd setsebool 1="setsebool -P haproxy connect any 1"
520
521
    cmd systemctl status="systemctl status haproxy.service -l --no-pager"
    cmd_haproxy stop="systemctl stop haproxy"
522
523
    cmd haproxy enable="systematl enable --now haproxy"
524
525
    526
527
    ##### SYSTAT
    528
529
530
    cmd SYSSTAT install path = 'rpm -q --filesbypkg sysstat'
    cmd SYSSTAT file list = 'find / -name '"'sysstat'"' '
531
532
533
    cmd install SYSSTAT = 'yum -y install sysstat'
534
   cmd enable SYSSTAT = ''
    cmd start SYSSTAT =''
535
536
537
    538
539
    ###### ModEvasive
    540
541
542
    cmd install ModEvasive = 'yum install mod evasive -y'
    cmd remove ModEvasive = '''yum -y remove mod evasive
543
544
    systemctl restart httpd
545
546
547
548
    549
    ##### Mailu
550
    551
552
    cmd show Mailu file list = 'find / -type d -name mailu'
553
554
    cmd show Docker Mailu files = 'docker container ls' #loop to see if if 'mailu' in the
    text
555
    cmd install Docker Mailu = ''
556
557
    cmd start docker compose Mailu = 'docker-compose -p mailu up -d'
558
559
    cmd mailu create admin user = ' docker-compose -p mailu exec -T admin flask mailu admin
    $MAIL SERVER AMDIN USR $MAIL SERVER DOMAIN "$MAIL SERVER AMDIN PASS" '
560
```